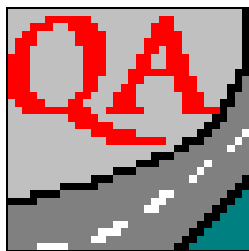


QASPEC



**Developed by the
Washington State Materials Laboratory**

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About QASPEC



QASPEC (Quality Assurance Specifications) was originally developed by WSDOT staff in the SmartWarell Spreadsheet application, and was converted to a Windows-based program in 1995. QASPEC was designed to calculate asphalt concrete pavement acceptance incentive pay. This application was modeled after a program developed by the Oregon State Department of Transportation and pilot tested in Washington.

The views in the QASPEC system provide incentive pay factors to contractors based on compaction and gradation test results. Once the contract and mix design information is established, you enter daily test results and the application will calculate the quality assurance pay incentive per section 1-06.2 Acceptance of Materials in the WSDOT 1994 Standard Specifications.

Accessing QASPEC Through the Login Screen

Double-click on the QASPEC icon, and a Login Screen will be displayed. Enter your user id and your password.

A list of available servers is displayed. If you plan to use the SQL (network) version of QASPEC, select the appropriate server. There may be an option for the QASPEC Standalone version, in which the database resides on the local PC. Select this option, if desired. If this option has not been installed on your computer, contact the Help Desk (see Tips & Troubleshooting) for assistance.

NOTE: Check the appropriate boxes in the Remember Login box if you want the application to remember your login id and/or password. If you check these boxes, you will not be prompted for the login parameters again. If you do not want to bypass the login screen at a later time, hold down the SHIFT key as you enter QASPEC.

The Standalone version of QASPEC does not prompt you for a login id or password.

If you want to change your password in the SQL version, you can do so in the Options menu, under Change Password.

Getting Started with QASPEC

The QASPEC application consists of 5 major elements: The **Contract Edit** view, the **Mix Design Edit** view, the **Job Mix Formula** view, and the **Gradation** and **Compaction** views. Each of these views have associated windows that create an integrated system for calculating asphalt concrete incentive pay based on mix design and class of mix.

The first stage in this application is the Contract Edit view, for establishing a new contract. Contract specific information is entered and edited in this window. These fields include: Contract Number (enter a valid 6-digit contract number, for example: 004444), Project Engineer, Contractor, Section, County, Organizational Code, and Units of measurement.

The next step in the QASPEC application is to enter data into the Mix Design view. Select the contract number from the drop-down list box, and enter the information in the Class of Mix, Mix ID Number, Plant Type and Anti-Strip Percent fields.

Press the **Asphalt Usage Cost** button to specify the Asphalt Usage Type and Unit Cost. This view *must* be completed before beginning a Compaction Sheet.

After completing the Contract and Mix Design views, select the Job Mix view. The Screen Sizes will be displayed, based on the Class of Mix that had been entered in the Mix Design Edit view. Enter the Job Mix Formula Percent and the JMF Weight Factor as determined from the Mix Design Recommendations, and defined in the WSDOT Standard Specifications, section 9-03.8(6)A. The Upper and Lower Specification Limits will be automatically calculated from this information.

The Job Mix Formula view *must* be completed before beginning a Gradation view.

Quality Assurance Specifications

File Edit Views Options Window Help

Set Active Mix Design

004149
004396
004414
004444
005678
009988

Mix Class: Class A Mix ID No: 51160

Description: The first mix design for this contract.

Plant Type: Drum Status: Checked Out

Total Bonus: \$1,056.20

Gradation Details:

Bonus: \$1,336.20 Total Tonnage: 2620.0
Pay Factor: 1.03

Compaction Details:

Bonus: (\$280.00) Total Tonnage: 1200.0
Pay Factor: 0.98

Ready

Set Active Mix Design



When you open the QASPEC application, the Set Active Mix Design window is displayed. Select an existing contract from the list on the left side of the screen, and the Mix Class and Mix ID Number(s) are displayed, as well as a description of the mix design, the status, and the gradation and compaction tonnage and pay factors. To return to this window, if it is closed, select the Set Active Design window from the View menu or press the icon on the toolbar.

New Contract Input



To begin a new contract, select the New Contract command from the File menu. The Contract Edit window will be displayed. In this view, you can input contract specific information such as Contract Number, Project Engineer, Contractor, Section, Organizational Code, County, and units (English or Metric).

To edit an existing contract, select the Edit Active Contract window from the View menu. The Contract Edit window will be displayed. Make the necessary changes to the contract information (i.e. project or contractor information).

New Mix Design



When you have established a new contract (see above), select the New Mix Design option from the File menu. Input the Contract Number, Class of Mix, Mix ID Number, Plant Type and the Anti-Strip Percent as well as any relevant Gradation or Compaction notes. When you have completed this, click on the **Asphalt Usage Cost** button to specify the Asphalt Usage types and unit costs by contract number.

NOTE: You must specify an Asphalt Usage type and Unit Cost *before* entering the tests lots into the Compaction view.


To edit the Mix Design information, select the Mix Design Edit screen from the Views menu, or click the right mouse button, and select the Edit Active Design screen from the popup menu.

Job Mix Formula



To set the contract's Job Mix Formula, select the Edit Job Mix Formula window from the View menu, or from the right mouse button's popup menu. The screen sizes in the Job Mix Formula Edit view are determined from the Class of Mix that was entered in the Mix Design view.

The Contract Number, Mix Class and Mix ID Number are displayed. Enter the **JMF %**, and the JMF Weight Factors and Upper and Lower Specification Limits will be automatically calculated. These limits are based on the broad band limits and tolerances, found in the Washington State Department of Transportation Standard Specifications.

If you want to enter a nonstandard mix class, select the **User** mix class from the Mix Design Edit view. If you want to modify the JMF Weight Factor, the Upper Spec Limit or the Lower Spec Limit, click on the edit button  on the toolbar.

Note: The current Contract Number, Mix ID Number and the Class of Mix are displayed on the top portion of the screen.

Asphalt Usage Type

The Asphalt Usage Cost and Type entries are necessary for entering new mix design information, as well as for editing an existing mix design. You can set the Asphalt Usage Cost and Type by accessing the **Asphalt Usage Cost** button on the Mix Design Edit screen, or by selecting Edit Asphalt Unit Costs from the Views menu or the right mouse button's popup menu.

The Asphalt Usage Cost window has a drop-down list box containing common Asphalt Usage Types. You can also enter a unique type. The Unit Cost of Asphalt is a requirement for compaction calculations.


Select the Insert icon  to specify additional Asphalt Usage types.

Note: The current Contract Number, Mix ID Number and the Class of Mix are displayed on the top portion of the screen.

Gradation

To enter and to view subplot data, select a contract number from the Set Active Mix Design window, and choose the Gradation Sheet option from the Views menu, or use the right mouse button's popup menu. The Gradation Sublot Edit screen is displayed.


To input new subplot data, select the insert button from the toolbar, and Gradation Sublot Edit view will be displayed. Enter a Sublot Number, Date Paved, Tonnage and Asphalt Usage Type, as well as any comments relating to this particular subplot, in the upper portion of the window. When this information has been entered, input Test Values for each screen size in the bottom portion of the window.

To modify subplot data from the Gradation Sheet, select the edit button  from the toolbar, or double-click on the subplot row to bring up the Gradation Edit view.

Compaction

To enter test lot data, select a contract number from the Set Active Mix Design window, and choose the Compaction Sheet option from the Views menu or use the

right mouse button's popup menu. The Compaction Sheet Edit screen is displayed. Enter the Lot Number, Tonnage, Date Paved, and Asphalt Usage Type for each lot, then input up to five Test Values per lot. There is also a comment field for each lot number.

After entering the data, save the changes and exit this view. The Compaction Sheet View is displayed. To edit lot data, double-click on a selected lot, or select a lot and click on the edit button  on the toolbar.

Before you begin a Compaction Sheet, you need to have completed the Contract and Mix Design views. You must also complete the Asphalt Unit Cost information.

NOTE: You need to input at least three tests for statistical analysis for the Compaction view.

Broad Band Specifications

The broad band specifications are updated by Headquarters Materials Laboratory staff. If it is necessary to modify the Broad Band Specs in the QASPEC application, contact the HQ. Materials Lab. These specifications refer to the proportion of materials by class of mix table in the Washington State Department of Transportation Standard Specifications, section 9-03.8(6).

Edit History

The Edit History function of the QASPEC application allows for accountability regarding update and delete actions. This function tracks the name, date, and type of edit, based on the contract number.

Select the Edit History window from the Views menu, or use the right mouse button's popup menu. The Edit History window displays edits to the application views. Specify a Contract Number, an Action Type (All, Insert or Delete), a date and name, and press the **Retrieve** button. The lower portion of the screen will then display this edit information. For more detailed edit information, double-click on a specific row, and the Edit History Details window is displayed. These details include the views that were edited, the type, time and date of the edit, the old and new values, and the name of the person making the changes. Use the **Reset** button to clear the information in the Edit History window to input new information.

Note: This function is not available in the Standalone version of QASPEC.

Commands

There are 3 ways to navigate through the QASPEC application:



KEYBOARD



MOUSE



TOOLBAR

Keyboard Menu Commands

The following menus are available in the QASPEC application:

File Menu

New Contract...

Keyboard shortcut: Alt + F, C

New Mix Design...

Keyboard shortcut: Alt + F, D

Print

Prints the current screen.

Keyboard shortcut: Alt + F, t

Print Reports...

Select the Print Reports command from the File menu. The Print Reports window displays available reports, including the Compaction Report, the Gradation Report, Contract Totals, and the Mix Design Report. Select a report, and press one of the buttons on the right side of the screen. You may **Print** the report directly, or select the **Print Preview** option to review the data. You can specify printers and print queues by pressing the **Print Setup** button.

Keyboard shortcut: Alt + F, R

Printer Setup...

Use this command to select a printer and a printer connection.

Options: Select the installed printer you want to use. To install printers and to configure ports, use the Windows Control Panel. (See Windows documentation for help with this configuration.)

The **Setup** option displays a dialog box for controlling default printer settings on your selected printer. (See Windows documentation for help with this configuration.)

Exit

Select this option to exit the QASPEC application.

Keyboard shortcut: Alt + F, x

Edit Menu

Undo

Use this command to reverse the last action, if possible. *NOTE:* This command applies only to a single action.

Keyboard shortcut: Alt + E, U

Cut

This command moves the selected text to the clipboard.

Keyboard shortcut: Alt + E, C

Copy

This command copies the selected text to the clipboard.

Keyboard shortcut: Alt + E, p

Paste

This command pastes the clipboard contents at the insertion point.

Keyboard shortcut: Alt + E, P

Insert...

This command opens the Mix Design Edit window.

Keyboard shortcut: Alt + E, n

Edit...

This command is view specific. In the Select Active Mix Design view, the edit command opens the Mix Design window. The Compaction, Gradation, etc., edit windows are displayed when the edit command is activated in those views.

Keyboard shortcut: Alt + E, E

Delete

This command is window context sensitive. If you activate this command in the Mix Design Edit window, for example, you will be notified that the delete action will erase the record from the associated windows, thereby deleting it from the database.

Keyboard shortcut: Alt + E, I

Save Changes

Use this command to save the changes made in the active window to the database.

Keyboard shortcut: Alt + E, v

Views Menu

Set Active Mix Design...

Gradation Sheet...

Compaction Sheet

Edit History...

Edit Active Contract...

Edit Active Design...

Edit Job Mix Formula...

Edit Asphalt Unit Costs...

Options Menu

Recalculate

Use this command to recalculate pay factors, lot bonuses, etc. The Save Changes command automatically computes these calculations, but a user can manually recalculate them, if necessary, with the Recalculate command.

Keyboard shortcut: Alt + O, R

Change Password...

Keyboard shortcut: Alt + O, P

Contract Transfer...

This command accesses the Check In and Check Out process for the contract transfer between the SQL server and the local PC. While a contract is checked out of the SQL version of QASPEC and into the Stand Alone version, the contract information is read only. The Status field in the Set Active Mix Design window of the SQL version reflects the checked out status.

Keyboard shortcut: Alt + O, T

Update Standalone Tables....

This command allows the user to update the system support tables in the QASPEC Stand Alone version that are derived from the Standard Specifications, including tables pertaining to pay factors, mix classes, screen sizes, and other support calculations. These tables only need to be updated in the case of a specification modification.

Keyboard shortcut: Alt + O, U

Edit Broad Band Specs...

(NOTE: This option is only available to administrators of the QASPEC application.)

Window Menu

Tile Vertical

Use this command to arrange open windows vertically so that all of them are visible.

Keyboard shortcut: Alt + W, T

Tile Horizontal

Use this command to arrange open windows side by side so that all of them are visible.

Layer

Use this command to place open windows on top of each other, with the most recently opened window on top. Select from the list of open windows at the bottom of the Windows menu to make a particular window active.

Keyboard shortcut: Alt + W, L

Cascade

Use this command to arrange open windows so that the title bar of each window is visible.

Keyboard shortcut: Alt + W, C

Arrange Icons

Use this command to arrange icons (minimized windows) into rows.

Keyboard shortcut: Alt + W, I

<Open Windows List>

This is a display of all of the currently open windows in the QASPEC application. Select from this list to make a particular window active.

Keyboard shortcut: Alt + W, 1...2...3...

Help Menu

Help Index

This command displays the help index for the QASPEC application.

Keyboard shortcut: Alt + H, H

How to Use Help

This command displays help for the Windows Help system.

Keyboard shortcut: Alt + H, U

Context Sensitive Help

This command displays help for the current window.

Keyboard shortcut: Alt + H, C

About Application

Use this command to display the version of QASPEC.

Right Mouse Button

Press the right mouse button, and a popup menu will appear:

Set Active Design...

Gradations Sheet...

Compaction Sheet...

Edit History...

Edit Active Contract...













Edit Active Design...

Edit Job Mix Formula...

Edit Asphalt Unit Costs...

Toolbar

You can access several views in the QASPEC application by selecting the icons on the toolbar:

	Set Active Mix Design
	Print
	Print Reports
	Edit
	Insert
	Delete
	Save Changes
	Add New Contract
	Add New Mix Design
	Job Mix Formula
	Recalculate
	Context Sensitive Help

Tips and Troubleshooting




Troubleshooting the QASPEC application

The QASPEC application was developed by MIS and Materials Laboratory personnel. If you need assistance, contact the Materials Lab Help Desk, at (360) 709-5454.

- ⇒ To create a Compaction record in the QASPEC application, you need to initiate a New Contract, a New Mix Design, and complete the Asphalt Usage Cost information.
- ⇒ To create a Gradation record, you need to initiate a New Contract, a New Mix Design, and complete the Job Mix Formula Edit screen.



Tips running for the QASPEC application

Refer to the on-line help system in QASPEC for information about menu commands, tool bars and mouse shortcuts. Most views have context-sensitive help, which can be accessed by clicking the Help  icon on the toolbar.

- ⇒ A shortcut for inputting data into certain drop-down lists (for example the Units field in the Contract Edit view) is to type the first letter of the word, and this will in most cases bring the entire word or phrase into the field. In the Units example, type **E** to bring the English selection into the field, or **M** to place Metric into the field.
- ⇒ In the Compaction Sheet view, you can access the Compaction Sheet Edit view by double-clicking on a selected lot, or by highlighting the lot and selecting the Edit icon on the toolbar.
- ⇒ Double-click on a selected subplot in the Gradation Sheet view, and the Gradation Subplot Edit view will be displayed. You can also click the Edit icon on the toolbar to access the Gradation Subplot Edit view.
- ⇒ In the Job Mix Formula Edit view, click on the Edit button on the toolbar to edit the JMF Weight Factor, the Upper Spec. Limit and the Lower Spec. Limit. (These fields are non-editable, otherwise.) In the Mix Class Edit view, the **Class User** selection in the Class of Mix field allows for non-standard mix classes to be input into the Job Mix Formula Edit view.